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RESEARCH INTERESTS	Data analytics, graph mining, randomized algorithms, social network analysis, algorithms for distributed/parallel architectures for big data, privacy issues in data analysis, statistical learning theory.	
EDUCATION	<b>Brown University</b> , Providence, Rhode Island, USA Ph.D., Computer Science, <i>in progress since September 2009, graduating in May 2014</i> <ul style="list-style-type: none"><li>• Doctoral Dissertation: <i>Sampling-based randomized algorithms for big data analytics</i></li><li>• Advisor: Prof. Eli Upfal</li></ul> M.S., Computer Science, May 2010 <b>Università di Padova</b> , Padua, Italy Laurea Magistrale (M.S.) 110/110 <i>cum laude</i> , Computer Engineering, July 2009 <ul style="list-style-type: none"><li>• Master Thesis: <i>Top-k frequent itemsets mining through sampling</i></li><li>• Advisors: Prof. Andrea Pietracaprina, Prof. Eli Upfal, Fabio Vandin</li></ul> Laurea (B.S.), Information Engineering, July 2007 <ul style="list-style-type: none"><li>• Final Project: <i>Algorithmical foundations of cryptography</i></li><li>• Advisor: Prof. Andrea Pietracaprina</li></ul>	
PUBLICATIONS	<p>[10] M. Riondato and F. Vandin. Finding the true frequent itemsets. In <i>Proceedings of the 14th SIAM International Conference on Data Mining, SDM 2014, Philadelphia, PA, USA, April 24 – 26, 2014</i>, SIAM, 2014.</p> <p>[9] M. Riondato and E. Upfal. Efficient discovery of association rules and frequent itemsets through sampling with tight performance guarantees. <i>ACM Transactions on Knowledge Discovery from Data (in press)</i>.</p> <p>[8] M. Riondato and E. M. Kornaropoulos. Fast approximation of betweenness centrality through sampling. In <i>Proceedings of the 7th International Conference on Web Search and Web Data Mining, WSDM 2014, New York, NY, USA, February 24 – 28, 2014</i>, ACM, 2014.</p> <p>[7] M. Riondato, J. A. DeBrabant, R. Fonseca, and E. Upfal. PARMA: A parallel randomized algorithm for association rules mining in MapReduce. In <i>Proceedings of the 21st ACM International Conference on Information and Knowledge Management, CIKM 2012, October 29 – November 02, 2012, Maui, HI, USA</i>, pages 85–94. ACM, 2012.</p> <p>[6] M. Riondato and E. Upfal. Efficient discovery of association rules and frequent itemsets through sampling with tight performance guarantees. In <i>Machine Learning and Knowledge Discovery in Databases, ECML PKDD 2012</i>, pages 25–41. Springer, 2012.</p> <p>[5] A. Pietracaprina, G. Pucci, M. Riondato, F. Silvestri, and E. Upfal. Space-round tradeoffs for MapReduce computations reduce computations. In <i>International Conference on Supercomputing, ICS 2012, Venice, Italy, June 25–29, 2012</i>, pages 235–244. ACM, 2012.</p> <p>[4] M. Akdere, U. Çetintemel, M. Riondato, E. Upfal, and S. B. Zdonik. Learning-based query performance modeling and prediction. In <i>Proceedings of the 28th International Conference on Data Engineering, ICDE 2012, April 1–5, 2012, Washington, DC, USA</i>, pages 390–401. IEEE Computer Society, 2012.</p> <p>[3] M. Riondato, M. Akdere, U. Çetintemel, S. B. Zdonik, and E. Upfal. The VC-dimension of SQL queries and selectivity estimation through sampling. In <i>Machine Learning and Knowledge Discovery in Databases - European Conference, ECML PKDD 2011, Athens, Greece, September 5–9, 2011, Proceedings, Part II</i>, volume 6912 of <i>Lecture Notes in Computer Science</i>, pages 661–676. Springer, 2011.</p> <p>[2] M. Akdere, U. Çetintemel, M. Riondato, E. Upfal, and S. B. Zdonik. The case for predictive database systems: Opportunities and challenges. In <i>CIDR 2011, Fifth Biennial Conference on Innovative Data Systems Research, Asilomar, CA, USA, January 9–12, 2011, Online Proceedings</i>, pages 167–174. <a href="http://www.cidrdb.org">www.cidrdb.org</a>, 2011.</p> <p>[1] A. Pietracaprina, M. Riondato, E. Upfal, and F. Vandin. Mining top-k frequent itemsets through progressive sampling. <i>Data Mining and Knowledge Discovery</i>, 21(2):310–326, 2010.</p>	

- [11] A. Anagnostopoulos, L. Becchetti, A. Fazzone, I. Mele, and M. Riondato. The importance of being experts: Efficient max-finding in crowdsourcing.
- [12] M. Riondato, D. García-Soriano, and F. Bonchi. Graph summarization with guarantees.
- [13] M. Riondato, M. Akdere, U. Çetintemel, S. B. Zdonik, and E. Upfal. The VC-dimension of SQL queries and selectivity estimation through sampling (extended version).

AWARDS	SIAM Student Travel Grant to SIAM SDM 2014	<b>April 2014</b>
	Brown University Dissertation Fellowship	<b>Fall 2013</b>
	Yahoo! Research Summer Internship	<b>Summer 2013</b>
	Research Fellowship from MIUR of Italy under Project AlgoDeep prot. 2008TFBWL4	<b>Summer 2011</b>
	Brown University Graduate Fellowship	<b>Academic Year 2009–10</b>

INVITED TALKS	Efficient Frequent Itemsets mining through sampling <i>Computer Science and Artificial Intelligence Laboratory, MIT</i> , 04/10/2014.
	Taming the challenges of Big Data with statistical data analytics. <i>Department of Computer Science, Boston College</i> , 02/07/2014.
	Fast betweenness estimation through sampling. <i>Data Management Group Seminar, Boston University</i> , 10/17/2013.
	Fast betweenness estimation through sampling. <i>Lab Research Seminar, Yahoo! Labs Barcelona</i> , 6/13/2013.
	Fast betweenness estimation through sampling. <i>Advanced Computing Group Talk, Department of Information Engineering, University of Padua, Italy</i> , 5/30/2013.
	Statistical learning theory meets knowledge discovery: Randomized algorithms for Big Data analytics. <i>Brown CS Industrial Partners Program Symposium</i> , 4/25/2013.
	Approximate aggregate database queries through sampling. <i>Invited Lecture for CSCI-2950-T, Brown University</i> , 10/25/2011.
	Graphs algorithms in MapReduce: Design choices and optimizations. <i>Invited Lecture for CSCI-2950-U, Brown University</i> , 9/27/2011.
	Statistical learning theory meets databases. <i>Advanced Computing Group Talk, Department of Information Engineering, University of Padua, Italy</i> , 06/24/2011.
ADDITIONAL RESEARCH EXPERIENCE	Top-k frequent itemsets mining through sampling. <i>Advanced Computing Group Talk, Department of Information Engineering, University of Padua, Italy</i> , 9/16/2010.

ADDITIONAL RESEARCH EXPERIENCE	<b>Yahoo! Labs</b> , Barcelona, Spain	
	<i>Summer Intern Research Scientist in the Web Mining Group</i>	<b>June – August 2013</b>
	<ul style="list-style-type: none"> <li>Worked with Dr. Francesco Bonchi and others on algorithms for graph summarization and for frequent itemsets mining from data streams in a distributed setting.</li> </ul>	
	<b>Summer School on Massive Data Mining</b> , Copenhagen, Denmark	
	<i>Student</i>	<b>August 8 – 10, 2012</b>
	<ul style="list-style-type: none"> <li>Attended the Summer School on Massive Data Mining organized by Prof. R. Pagh at IT University of Copenhagen.</li> </ul>	
	<b>Sapienza Università di Roma</b> , Rome, Italy	
	<i>Visiting Ph.D. Student</i>	<b>June – July 2012</b>
	<ul style="list-style-type: none"> <li>Worked with Prof. S. Leonardi, A. Anagnostopoulos, and L. Becchetti on algorithms for a model of crowdsourcing computation, and on algorithms for MapReduce.</li> </ul>	
	<b>Università di Padova</b> , Padua, Italy	
	<i>Research Fellow</i>	<b>May – July 2011</b>
	<ul style="list-style-type: none"> <li>Worked with Prof. A. Pietracaprina, G. Pucci, and F. Silvestri on “The MapReduce Paradigm: computational model and algorithms”. Funded by MIUR of Italy under Project AlgoDEEP prot. 2008TFBWL4.</li> </ul>	
	<b>Chalmers University of Technology</b> , Gothenburg, Sweden	
	<i>Visiting Ph.D. Student</i>	<b>August 2010</b>

	<ul style="list-style-type: none"> <li>• Worked with Prof. Devdatt Dubhashi and helped organize a seminar on Probability and Computing.</li> </ul>
	<b>Brown University</b> , Providence, RI, USA <i>Visiting Grad Student</i>
	<ul style="list-style-type: none"> <li>• Worked with Prof. Eli Upfal on master thesis <i>Top-K Frequent Itemsets Mining through Sampling</i>.</li> </ul>
TEACHING AND ADVISING TRAINING AND EXPERIENCE	<b>The Harriet W. Sheridan Center for Teaching and Learning (Brown University)</b> , Providence, RI, USA <ul style="list-style-type: none"> <li>• Teaching Certificate I: Reflective Learning, AY 2013–14</li> </ul> <b>Brown University</b> , Providence, Rhode Island, USA <ul style="list-style-type: none"> <li>• Mentor, New Scientist Program Graduate-Undergraduate Mentoring Initiative, Spring 2014</li> <li>• Teaching Assistant, Probability and Computing, Spring 2012, Spring 2013, Spring 2014</li> <li>• Teaching Assistant, Probabilistic Methods in Computer Science, Fall 2010</li> </ul>
SERVICE	<b>External/Sub- reviewer for the following conferences</b> <ul style="list-style-type: none"> <li>• RANDOM'11, ICS'12, IPDPS'12, WSDM'13, MFCS'13, BigData'13, WSDM'14.</li> </ul> <b>Brown University Graduate Student Council</b> <i>President</i>
	<b>April 2011 – December 2012</b> <ul style="list-style-type: none"> <li>• Represented the interests of the entire graduate student community (approx. 2000 students) with the university administration and the broader community at all levels. Previously held positions include Vice-President of Administration (Jan. – April 2011) and representative for the Computer Science Department (Sept. 2009 – April 2011, Jan 2013 – <i>ongoing</i>).</li> </ul>
	<b>Brown University Graduate Council</b> <i>Student Representative</i>
	<b>September 2011 – May 2013</b> <ul style="list-style-type: none"> <li>• Represented the graduate student community in the highest body governing graduate education.</li> </ul>
	<b>Brown University Strategic Planning Committee on Doctoral Education</b> <i>Student Representative</i>
	<b>September 2012 – May 2013</b> <ul style="list-style-type: none"> <li>• Represented the graduate student community to develop the presidential strategic plan for the next decade.</li> </ul>
	<b>Brown Computer Science Theory Lunch</b> <i>Organizer</i>
	<b>January – December 2010</b> <ul style="list-style-type: none"> <li>• Responsible for organizing the weekly meeting of the Theory Group.</li> </ul>
MEMBERSHIP	<b>Society for Industrial and Applied Mathematics (SIAM)</b> <ul style="list-style-type: none"> <li>• Student member and member of SIAM Activity Group on Data Mining and Analytics (SIAG/DMA).</li> </ul> <b>Association for Computing Machinery (ACM)</b> <ul style="list-style-type: none"> <li>• Student member and member of Special Interest Group on Knowledge Discovery from Data (SIGKDD).</li> </ul>
SOFTWARE	<b>CentrSampl</b> <ul style="list-style-type: none"> <li>• Algorithm to estimate node betweenness centrality in large graphs. Based on [8].  <a href="http://cs.brown.edu/~matteo/centrsampl.tar.bz2">http://cs.brown.edu/~matteo/centrsampl.tar.bz2</a>.</li> </ul> <b>PARMA</b> <ul style="list-style-type: none"> <li>• Frequent itemsets and association rules mining algorithm for Hadoop MapReduce. Based on [7].  <a href="http://cs.brown.edu/~matteo/parma.tar.bz2">http://cs.brown.edu/~matteo/parma.tar.bz2</a>.</li> </ul> <b>FreeSBIE</b> <i>Developer, Release Engineer for the 2.x series</i>
	<b>April 2004 – July 2009</b> <ul style="list-style-type: none"> <li>• Developed FreeSBIE, a Live-CD distribution of FreeBSD bootable from CD-ROM. Release Engineer for FreeSBIE 2.X. series, responsible for all aspects of the release. <a href="http://www.FreeSBIE.org">http://www.FreeSBIE.org</a>.</li> </ul>
	<b>The FreeBSD Project</b> <i>src Committer</i>
	<b>January 2006 – June 2013</b> <ul style="list-style-type: none"> <li>• Contributed to the development of the FreeBSD UNIX operating system. Granted write access to the main source repository. Worked on the <i>jail</i> security feature and on handling and solving bug reports of various nature. Author of the <i>Jail</i> chapter in the FreeBSD Handbook. <a href="http://www.FreeBSD.org">http://www.FreeBSD.org</a>.</li> </ul>

## REFERENCES

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## UP-TO-DATE VERSION

Available from [http://cs.brown.edu/~matteo/matteo\\_riondato\\_cv.pdf](http://cs.brown.edu/~matteo/matteo_riondato_cv.pdf)